

## **REMARKS<sup>1</sup>**

### **Summary**

Claims 1-3, 8, 13, 17, 18 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication Number 2004/0066756 (Ahmavaara et al.) in view of U.S. Patent Application Publication Number 2004/0029580 (Haverinen et al.).

Claims 4, 5, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara et al. in view of Haverinen et al. and further in view of U.S. Patent Application Publication Number 2003/0176188 (O'Neill).

Claims 6, 7, 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara et al. in view of Haverinen et al. and further in view of O'Neill and further in view of U.S. Patent Application Publication Number 2004/0103282 (Meier et al.).

Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara et al. in view of Haverinen et al. and further in view of O'Neill and further in view of Meier et al. and further in view of U.S. Patent Number 7,359,718 (Tao et al.).

By this Amendment, claim 1 has been amended to recite, in part, "the WLAN access network." Exemplary support of the amendment can be found in page 11, line 4-15 and page 12, line 12-14 of the application originally filed. No new matter has been introduced.

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<sup>1</sup> As Applicant's remarks with respect to the Examiner's rejections are sufficient to overcome these rejections, Applicant's silence as to certain assertions or requirements applicable to such rejections (e.g., whether a reference constitutes prior art, motivation to combine references, etc.) is not a concession by Applicant that such assertions are accurate or such requirements have been met, and Applicant reserves the right to analyze and dispute such in the future.

Reconsideration of the pending claims 1-29 in light of the foregoing amendments and the following comments is respectfully requested.

Claim Rejections Under 35 U.S.C. §103(a) of Independent Claim 1

Applicant respectfully traverses the rejection of claim 1 under 35 U.S.C. § 103(a).

The key to support any rejection under 35 U.S.C. § 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. Such an analysis should be made explicit and cannot be premised upon mere conclusory statements. MPEP § 2142.

“[T]he framework for the objective analysis for determining obviousness under 35 U.S.C. § 103 is stated in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966). . . . The factual inquiries . . . [include determining the scope and content of the prior art and] . . . [a]scertaining the differences between the claimed invention and the prior art.” MPEP § 2141(II). “Office personnel must explain why the difference(s) between the prior art and the claimed invention would have been obvious to one of ordinary skill in the art.” MPEP § 2141(III).

In this application, no *prima facie* case of obviousness is established because the Office Action has neither properly determined the scope and content of the prior art nor properly ascertained the differences between the claimed invention and the prior art. Accordingly, the Office Action has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art. See MPEP § 2141.

Amended claim 1 recites:

An optimized interaction method of a Wireless Local Area Network (WLAN) WLAN user terminal selecting an access mobile communication network, comprising the steps of:

a.

after a wireless connection between the WLAN user terminal and a WLAN access network is established, the WLAN access network or the WLAN user terminal initiating an access authentication procedure, and the WLAN access network sending a user identity request message to the WLAN user terminal;

b.

after receiving the user identity request message (feature b1), the WLAN user terminal determining network selection information to be currently carried according to a detecting result of whether the WLAN access network is changed (feature b2) or according to user selection information which means relevant network information input or set by a user (feature b3), and

returning a message containing the determined network selection information to the WLAN access network (feature b4); and

c.

the WLAN access network judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected (feature c1);

if so, the WLAN access network sending an access authentication request from the WLAN user terminal to a mobile communication operation network indicated in the network selection information (feature c2),

otherwise, the WLAN access network sending a notification signaling to the WLAN user terminal, the WLAN user terminal completing subsequent operations according to contents in the notification signaling (feature c3).

The numbering of the features in claim 1 reproduced above is for purposes of simplifying the discussions below.

In the Office Action, the Examiner considers that Figure 1, abstract, paragraphs [0009], [0013] and [0031] of Ahmavaara as disclosing the step (a) of claim 1, paragraph [0005] of Ahmavaara as disclosing the feature b1 of claim 1, and the paragraph [0028] of Ahmavaara as disclosing the features b2 and b3 of the previously presented claim 1. Furthermore, the Examiner considers that Haverinen discloses the features c1-c3 of claim 1.

However, Applicant respectfully submits that not all the limitations of the amended claim 1 are disclosed or suggested by the prior art references, either considered alone or in combination.

#### 1. Feature b

Claim 1 recites, *inter alia*, a combination including "after receiving the user identity request message, the WLAN user terminal determining network selection information to

be currently carried according to a detecting result of whether the WLAN access network is changed or according to user selection information which means relevant network information input or set by a user, and returning a message containing the determined network selection information to the WLAN access network.”

Paragraph [0005] of Ahmavaara discloses that

In the WLAN specification (IEEE 802.11a and b which is incorporated herein by reference in its entirety), a WLAN can inform a UE of a service set identifier (SSIDs) (length 32 octets) of networks which are connectable thereto. Typically in WLAN systems, the WLAN SSID field includes a "network name". This network name is freely selectable ASCII string by the WLAN provider. It is typically something like "WLAN NW XYZ " or "Mr Smith WLAN" or "NOKIA WLAN". These types of names are used manually by the user to select the network to which to connect. However this requires a priori knowledge about the capabilities of the network having a certain name. This type of usage is acceptable for private networks to which the user typically always connects to a small number of WLAN networks. (emphasis added)

Ahmavaara discloses that WLAN can inform a UE of SSIDs of networks which are connectable thereto, but does not teach or suggest the combination of "... receiving the user identity request message (by the WLAN user terminal), the WLAN user terminal determining network selection information ...," as recited in amended claim 1.

## 2. Feature c

Claim 1 also recites a combination including “judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected; if so ...; otherwise, ....”

FIG. 1 of Haverinen is a schematic overview of one embodiment of an improved system, an improved WLAN terminal and an improved authentication server; FIG. 6 is a timing diagram of one embodiment of the system in FIG. 1 of Haverinen. And paragraphs [0051]-[0053] are detailed description of FIG 6.

Haverinen discloses that

The WLAN terminal responds with an EAP-Response/Identity packet 604, which includes the NAI including the service selector indicator. The WLAN access point then sends a RADIUS Access-Request packet 606, which includes the NAI including the service selector indicator, to the authentication server. When the authentication server has received the RADIUS Access-Request packet 606 it checks whether the terminal and/or the user is authorized to connect to the requested service or not. If the user/terminal is not authorized, then the authentication server refuses the connection attempt. (see paragraph [0051] of Haverinen, emphasis added.)

However if the user/terminal is authorized, then the authentication server sends a RADIUS Access-Challenge packet 608, including an EAP-

request, to the WLAN Access point. When the RADIUS Challenge-Challenge packet 608 is received at the WLAN Access point, the WLAN Access point sends an EAP-request packet 610, including the above mentioned EAP-request, to the WLAN terminal. The WLAN terminal responds to this packet 610 by sending an EAP-response packet 612 to the WLAN access point, which then sends a RADIUS Access-Request packet 614, including the EAP-response, to the authentication server. The procedure of sending packets 608, 610, 612, and 614 may be repeated N number of times. The value of N varies depending on the authentication method used. (see paragraph [0052] of Haverinen.)

...If the authentication is a failure the authentication server sends a failure packet to the WLAN terminal via the WLAN access point. However, if the authentication is a success the authentication server retrieves the network attributes needed for providing a connection in accordance with the service that was requested by means of the service selector indicator. ...The WLAN access point then provides the WLAN terminal with an EAP-Success packet 618, and now the WLAN terminal has access to the requested service. (see paragraph [0053] of Haverinen.)

In view of the above mentioned figures and description, Haverinen discloses "[w]hen the authentication server has received the RADIUS Access-Request packet 606 it checks whether the terminal and/or the user is authorized to connect to the requested

service or not.” However, claim 1 recites “judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected” at the WLAN access point. Applicant respectfully submits that Haverinen does not teach or suggest “the WLAN access network judging whether the network selection information in the received message indicates one of the mobile communication operation networks to which the WLAN access network is currently connected,” as recited in amended claim 1.

For at least the foregoing reasons, the Office Action has failed to properly determine the scope and content of the prior art. Accordingly, the Office Action has failed to clearly articulate a reason why the prior art would have rendered the claimed invention obvious to one of ordinary skill in the art. MPEP § 2141. Applicant respectfully submits that Ahmavaara in view of Haverinen taken alone or together do not disclose all of the elements of amended claim 1 and amended claim 1 is allowable over the applied references.

#### Dependent Claims 2, 3, 8, 13, 17, 18, 20-29

Claims 2-3, 8, 13, 17, 18 and 20-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara in view of Haverinen.

Claims 2-3, 8, 13, 17, 18 and 20-29 ultimately depend from claim 1 and include all of the elements of claim 1. As discussed above, claim 1 is patentable over Ahmavaara in view of Haverinen. Therefore, claims 2-3, 8, 13, 17, 18 and 20-29 are patentable over the applied references at least due to their dependence therefrom.



Dependent Claims 4, 5, 16 and 19

Claims 4, 5, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara in view of Haverinen and further in view of O'Neill.

Claims 4, 5, 16 and 19 ultimately depend from claim 1 and include all of the elements of claim 1. As discussed above, claim 1 is patentable over Ahmavaara in view of Haverinen. O'Neill, which was cited as allegedly teaching "after being successfully accessed to the mobile communication operation network indicated in the network selection information, the current WLAN user terminal updating the WLAN access identification information ...," fails to cure the deficiency of Ahmavaara in view of Haverinen. Therefore, claim 1 and its dependent claims 4, 5, 16 and 19 are allowable over Ahmavaara in view of Haverinen and further in view of O'Neill.

Dependent Claims 6, 7, 10-12 and 15

Claims 6, 7, 10-12 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara in view of Haverinen and further in view of O'Neill and further in view of Meier.

Claims 6, 7, 10-12 and 15 ultimately depend from claim 1 and include all of the elements of claim 1. As discussed above, claim 1 is patentable over Ahmavaara in view of Haverinen and further in view of O'Neill. Meier, which was cited as allegedly teaching "Registration Reply Lifetime field contains a registration lifetime, etc." fails to cure the deficiency of Ahmavaara in view of Haverinen, and further in view of O'Neill. Therefore,

claim 1 and its dependent claims 6, 7, 10-12 and 15 are allowable over Ahmavaara in view of Haverinen, O'Neill and further in view of Meier.

Dependent Claims 9 and 14

Claims 9 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ahmavaara in view of Haverinen and further in view of O'Neill and further in view of Meier and further in view of Tao.

Claims 9 and 14 ultimately depend from claim 1 and include all of the elements of claim 1. As discussed above, claim 1 is patentable over Ahmavaara in view of Haverinen and further in view of O'Neill and further in view of Meier. Tao, which was cited as allegedly teaching "a location determination and location tracking in wireless networks," fails to cure the deficiency of Ahmavaara in view of Haverinen and further in view of O'Neill and further in view of Meier. Therefore, claim 1 and its dependent claims 9 and 14 are allowable over Ahmavaara in view of Haverinen, O'Neill and further in view of Meier, and further in view of Tao.

**CONCLUSION**

In view of the foregoing remarks, Applicant submits that the claims are not rendered obvious in view of the prior art references cited against this application. Applicant therefore respectfully requests reconsideration and timely allowance of the pending claims.

Please grant any extensions of time required and charge any additional required fees to Deposit Account 06-0916.

Respectfully submitted,

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